

SECOND CARNEGIE INQUIRY INTO POVERTY  
AND DEVELOPMENT IN SOUTHERN AFRICA

Aspects of the political economy  
of drought and water in Transkei

by

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Aspects of the Political Economy of Drought and Water in Transkei.

"It is a remark frequently made by travellers that the climate of South Africa is becoming dryer. Springs which were once abundant are now weak, and rivers that formerly flowed almost constantly, now seldom run. The hippopotamus used to be found in pools in the Kuruman river in Bechuanaland, which are now quite dry except in an unusually wet season. Is this in consequence of less rain falling, or some other cause? The observations made for 47 years at the Royal Observatory and the scanty records elsewhere give no support to the view that the general rainfall is materially decreasing." (Gamble 1887 quoted in Pereira, 1973 : 79).

"There has always been a drought in Transkei because the people are poor".  
Transkei Drought Relief Co-ordinator, Untata, 1984.

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## 1. INTRODUCTION

A reading of planning documents such as Transkei's "The Physical and Spatial Basis for Transkei's First Five Year Development Plan" reveals an apparent contradiction. On the one hand, an evaluation of the natural and climatological resource base reveals a substantial agro-economic potential. Thus, for example

"Not only are the surface water resources of Transkei clearly very substantial, but the possibilities for water storage also appear promising" (P 41) and

"The ground water resource is very substantial and forms a very valuable resource, especially in the rural areas". (P 43).

On the other hand we have the generalised view that water related problems are key ones for most rural communities. Thus, for example, a survey conducted in the Umzimkulu district found that 61% of interviewed households felt that water needs were difficult to fulfill and table I contains the water related answers of respondents.

TABLE I: Water Needs - Problems and Strategies

Type of water problem	Duration of water problem		
	Always a problem	Since Resettlement	Total
Far away	30,8	69,2	26,9
Inadequate	33,3	66,7	19,2
Far and inad	42,5	57,5	21,2
Total	41,0	59,0	n= 156

Source : May (1984)

The greatest identified problems were either that water was too far away (26,9%) or that it was inadequate in volume (19,2%). Only 12.2% felt that the water supply was unhealthy. This is apparently at odds with the fact that only one of the springs in the 14 residential areas was protected with resultant fouling by small stock. The possible explanation being that volume is so great a problem that qualitative considerations are secondary.

A second interesting point about the table is that water problems are seen to have increased since Betterment and May (1984 : 115) attributes this to the fact that planned water sources have as yet not been constructed. The result is to increase the concentration of population on existing water supplies. This situation is likely to be exacerbated by the poor windmill maintenance record in Transkei. Thus a survey in the South West found that while access to water was "generally good" in villages with windmills, they were not working in  $\frac{1}{3}$  of the villages visited and in one case had been out of action for 7 years. (Hawkins Associates, 1984 : 227). Furthermore, about 80% of springs, prime village water sources, are unprotected and suffer from fouling by livestock. It would thus seem reasonable to generalise May's (1984 : 116) conclusion that "the majority of the sample did not have access to a convenient and adequate supply of water".

This paper attempts to unravel some of the explanation of this apparent paradox. In doing so, it locates the problems of drought and water provision within the broader political economy of Separate Development.

## 2. Population, Production and Rural Poverty in Transkei

95% of the estimated 3,2 million inhabitants of Transkei live in the rural areas. (Wakeelin, 1983). These areas contain some of the worst victims of South African 'polarised' development. As in the other 'labour reserves', ecological and human degradation is extreme as can be seen from the following characteristics.

- 66% of the adult population is illiterate;
- two thirds of rural households had cash incomes below the estimated household subsistence level of R1 509 in 1982.
- Tuberculosis is perhaps the greatest killer with 5 times as many open adult sufferers as the next highest homeland, Kwazulu. (Sasha, 1982).
- Two thirds of the male labour force is permanently absent working as migrant labourers in the major urban areas of South Africa. (Thomas 1982).
- The mortality rate in children up to five years of age ranged up to 261 per thousand in Tabankulu and averaged 190. (Irwig, 1981).

Statistics such as these, which show the poverty of human existence, cannot in themselves explain the complex processess of underdevelopment and repression which combine to lock rural africans into a world of hopelessness. An adequate account would require an examination of the process by which pastoral cultivators were transformed into wage dependent households. (Southall, 1983 : 67). Such a task lies beyond the bounds of this report. It is sufficient for the purposes of this report to point to a number of schematic features of this history. (vid. Bundy, 1979 and Beinart, 1982).

Firstly, as Beinart (1982 : 3-4) notes in his study of Pondoland, peasant "underdevelopment in the context of Southern Africa, meant not a skewing of production in the rural economy through the necessity to produce cash crops, but mass dependence on wage labour". Through a variety of measures such as the poll and hut tax, land legislation, and biased state agricultural policies, the 'effort price' of migrant labour and agricultural labour were manipulated in favour of the former. Rural production fulfilled the subsistence needs of the non-productive (from the point of

view of the industrial capitalist economy) population rather than providing full time employment for primary workers.

Over time, the various instruments designed to extract migrant labour from the 'reserves' undermined the subsistence base and rural african households became increasingly dependent on incomes earned in the urban industrial capitalist economy for their survival. As african wages rose through the 1970's these tendencies were exacerbated, and the Buthelezi Commission marks an important structural change in Kwa Zulu in these words:

"In 1960, estimates placed remittances at just over one third of the subsistence sector's production : by 1976 the relationship had been reversed and the value of subsistence production was less then one third of the total remittance sent into the area in that year. In other words, by 1976 on average, three quarters of a rural family's disposable income ... came from remittances by absent family members".

A survey of agricultural development in Transkei in 1980 echoes this conclusion by emphasising its relative unimportance :

"The small gross income from farming (estimated at R246 per annum) comprised less than 20 percent of total household income and, as in the past, more than 80 percent was used for home consumption, indicating that the farm economy in Transkei is still largely subsistence based". (Bembridge, 1982 : 44).

However, while the low return on rural productive effort is an important component in understanding the dynamics of rural poverty, it must be supplemented by the urban side of South African history.

As rural underdevelopment continued, the pressures to migrate to the urban areas of South African increased. Between 1904 and 1951, the african urban population increased 5.6 times, and a peak annual rate of growth of 6,6% was attained between 1946 and 1951. The racially defined access to the labour market and the migrant labour system meant that this growing group of permanent urbanites was caught between

job reservation of better paid jobs for white urbanites and low african wages. The result was massive urban poverty. From the passing of the Native (Urban Areas) Act in 1923, there were increased attempts to regulate the cityward flow of africans as urban policy came to approximate the racial and economic imperatives of the Stallard Doctrine which stated that 'permanent' african settlement was to be confined to the 'reserves' and access to the 'white' cities limited to migrants required for production.

Under this guise a web of highly repressive land, population, and labour controls have been legislated and executed. As a result, the flow of africans to the 'white' urban areas has all but stopped. In addition, an estimated 2 million 'surplus' population has been 'resettled' out of 'white' areas into the homelands between 1960 and 1980. (Simkins, 1981). The combination of rural decline and population concentration is the primary explanation of african poverty. The figures quoted earlier in this section reveal clearly that the function of the homelands has changed from one of providing a subsistence base for migrant households, to a dumping ground for those discarded by the reproductive requirements of South African capital.

Hemmed in by an increasingly repressive set of 'influx' controls and subject to over a century of underdevelopment, the population in these areas suffer from endemic under and unemployment and are largely dependent on migrant remittances and pensions for their survival as can be seen in Table 2

TABLE 2 : SOURCES OF RURAL TRANSKEIAN CASH INCOME BY INCOME LEVEL 1982.

Income Interval (R)	% Households	Wages	Pensions	Remittance	Home Production	Total
- 500	23,90	10,65	19,40	67,05	2,90	100,00
501 - 1000	26,42	12,10	14,30	71,10	2,50	100,00
1001 - 1500	13,21	15,36	17,11	65,75	1,78	100,00
1501 - 2000	6,69	26,52	21,40	48,08	4,00	100,00
2001 - 3000	6,96	37,67	13,89	46,17	2,27	100,00
3001 - 4000	6,47	74,40	4,24	19,86	1,50	100,00
4001 - 5000	5,36	80,61	4,22	13,22	1,95	100,00
5001 - 10000	7,31	69,90	4,43	22,95	2,72	100,00
10000+	3,68	83,05	8,16	6,08	2,71	100,00

Source : IMDS Income and Expenditure Survey (Unpublished Results).

### 3. THE DROUGHT IN TRANSKEI 1983

Although the imposition of water restrictions in Durban - Pietermaritzburg made 1983 a clear drought year in the minds of urban South Africa, the dry hot spell in Transkei began in 1979 and in 1980/81 a drought relief programme of Rm 6,9 was run by the Transkei Government. Macro production figures show a decline in subsistence output through 1980 - 82 . However, the almost total absence of rain in 1983 meant that few crops were sown and even those that did failed. In this section the effects of the drought are considered both at the macro regional level and on the basis of a study of a rural village.

#### 3.1. THE URBAN AREAS

Although the level of Umtata dam fell to 20% in September, no water restrictions were imposed. In the smaller towns and at rural hospitals, however, severe water problems were experienced. Water tankers were required to take water to Port St Johns and the hospital at Isilimela, Bambisa, and Tafalofefe. In Bizana water restrictions were imposed.

In the South West all towns experienced severe water problems. The dam supplying water to the municipal water system in Idutywa dried up and the town was reliant on private boreholes. In Cofimvaba, Lady Frere, and Cala water ran only intermittently. When it did so the quality was so poor as to be nearly undrinkable. In Engcobo, boreholes and springs dried up for the first time in living memory and a report on the region concluded that "the whole question of urban water supplies requires urgent attention and effective organisation and control if these rural towns are to play their part in the development of the region". (Hawkins Associates 1984 : 226)

However, as the majority of the population live outside the ambit of municipal water supplies, it is necessary to turn to the effect of water shortage on rural communities.

#### 3.2 Subsistence Agricultural Output

Table 3 contains estimates of subsistence output for major crops in 1982

TABLE 3 : TOTAL SUBSISTENCE AGRICULTURAL PRODUCTION 1980 -1982

Crop Type	Harvest (tonnes)			% Change 1980 - 1982
	1980	1981	1982	
Mealies	139 263	205 175	204 750	47
Sorghum	22 204	20 364	21 976	-1
Pumkins	121 865	34 312	44 928	-63
Potatoes	73 276	11 978	8 411	-89
Cabbages	77 969	10 984	13 368	-83
Beans	15 336	14 083	2 774	-82
Peas	113	69	202	+79
Wheat	192	n.a	738	+284
Carrots	69	14	4	-94

Sources : Abedian (1981, 1984).

Two contradictory trends are identifiable. Firstly, as might be expected, there is a drastic decline in output for most crops. Secondly, however, the production of maize, peas and wheat increased. The most probable explanation for this phenomenon is that as conditions become drier, households move away from vegetable crops towards the less water intensive maize. In the case of peas and wheat they are winter crops and perhaps less disturbed by dry summers.

Total subsistence output is the sum of three types of farming; viz homestead production on small allocated plots which are available to most household; communal garden production which concentrates on vegetables; and dryland production. Fewer households have access to fields than homestead gardens and the impact on the less powerful households can best be seen by examining trends in homestead production. Table 4 reveals a decline in production for all homestead crops over the period. As these gardens are the major source of fresh vegetables, the implications for already inadequate rural diets are severe.

TABLE 4: HOMESTEAD AGRICULTURAL OUTPUT 1980 - 1982

Crop	Harvest (tonnes)			% Change 1980 - 82
	1980	1981	1982	
Mealies	47 797	45 486	24 795	-48
Sorghum	11 949	15 418	10 685	-11
Pumkins	85 356	34 239	27 280	-68
Potatoes	51 206	11 884	8 396	-84
Cabbages	54 626	10 654	13 352	-76
Beans	8 548	10 199	-	-

Source : Abedian (1984)

### 3. Livestock Deaths

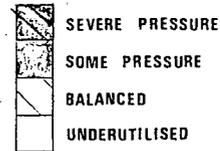
Cattle deaths provide perhaps the best index of the severity of the drought. Firstly, cattle are perhaps the most valuable single resource of most rural households and thus give an immediate index of loss. Secondly, because of their value, it is likely that cattle will only be allowed to die when all resources have been exhausted.<sup>(2)</sup> Thirdly, it seems that cattle deaths are reported regularly and that records are fairly accurate.<sup>(3)</sup> Finally, as they are reported by magisterial district, it is relatively easy to establish the spatial impact of the drought as in Map I which indicates the percentage of the herds recorded on 1/4/82 that had died by November 1983.

Based on cattle death figures it seems that the drought has been most severe in the central plateau area around Umtata (61,3%) and Idutywa (65,5%) and moving down into the South West. The least affected areas seem to be the districts lying against the mountains and the coastal areas of the North East.

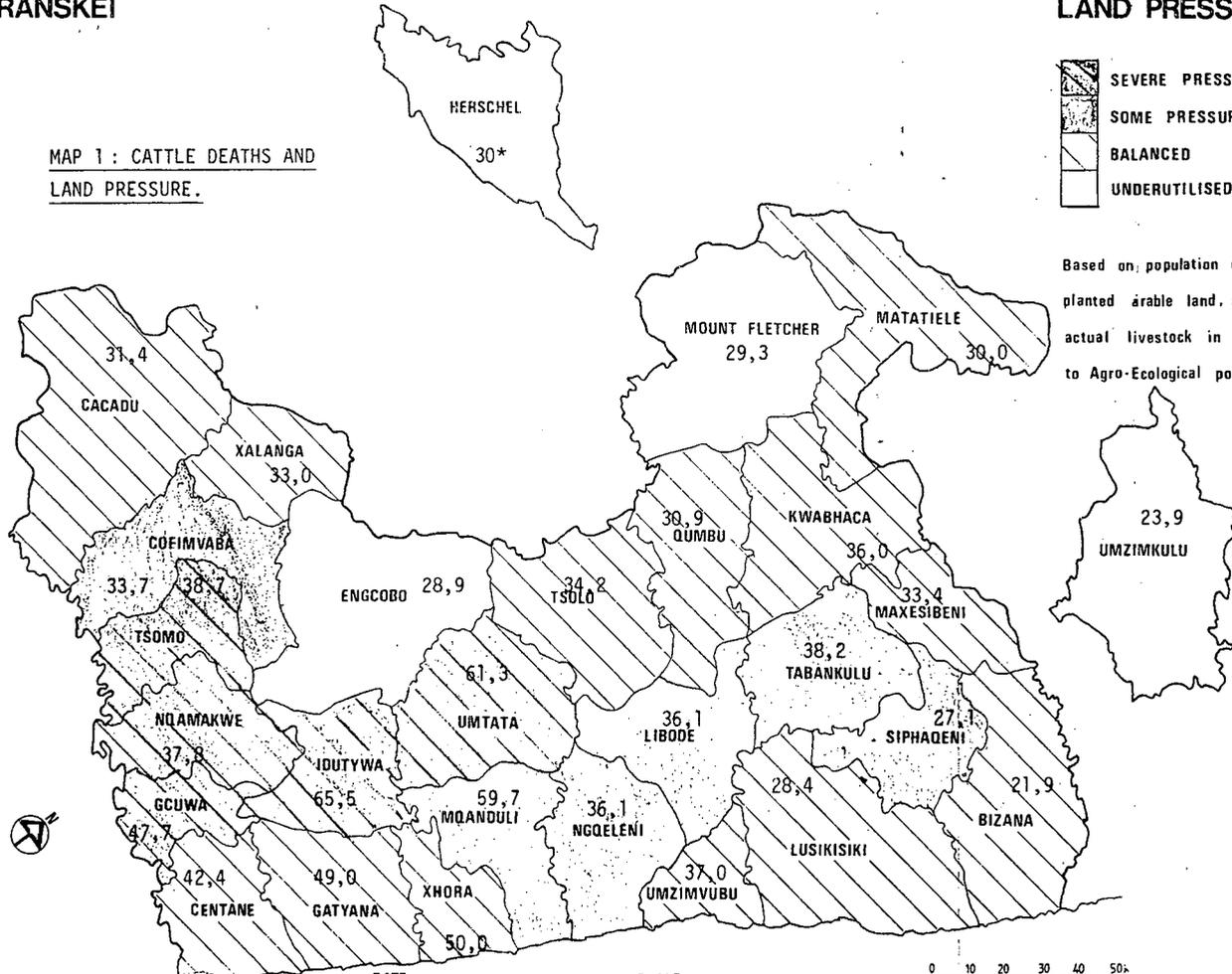
# TRANSKEI

# LAND PRESSURE

MAP 1: CATTLE DEATHS AND  
LAND PRESSURE.



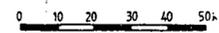
Based on, population density,  
planted arable land, and  
actual livestock in relation  
to Agro-Ecological potential.



Hawkes

DATE JULY 1980

SCALE 1:1000000



Many of these districts are in any case subject to drier conditions and may have been less affected. However, as table 5 reveals one of the most important explanations of the drought impact is the pressure on the land. Both Umtata and Idutywa, the heaviest hit districts, were more than 100% overstocked in 1980.

Cattle deaths also indicate the period of greatest crisis. Between April 1982 and November 1983 a total of 555 691 cattle were reported dead i.e 36,2% of the Transkeian herd of 1 537 155 cattle. 61% of these deaths were in the period between April and November 1983. Table 6 details the monthly deaths by expressing them as a percentage of the total between April and November and shows that the peak of the drought was between August and October.

TABLE 5: LAND PRESSURE AND CATTLE DEATHS

District	Population Density Persons/km <sup>2</sup>	Maize Area Planted %	Livestock		% under overstocked	Land Pressure Score	% Cattle Deaths
			Potential (000)LSUS	Actual (000)LSUS			
Bizana	50	7	98	91	-7	2	21,9
Cacadu	34	5	66	114	73	2	31,4
Centane	54	14	57	65	14	2	42,4
Cofimvaba	42	9	36	75	108	3	33,7
Engcobo	38	15	84	121	44	3	28,9
Gatyana	54	13	71	77	8	2	49,0
Gcuwa	58	16	15	35	133	4	47,7
Herschel	43	3	47	56	19	1	30,0
Idutywa	42	11	30	66	120	4	65,5
Kwabhaca	41	6	71	80	13	2	36,0
Libode	45	19	39	56	43	3	36,1
Lusikisiki	60	13	104	107	3	2	28,4
Matatiele	36	11	74	93	26	2	30,0
Maxesibeni	43	7	31	37	19	2	33,4
Mqanduli	55	26	60	80	33	3	59,7
Mt Fletcher	27	7	95	80	-16	1	29,3
Ngqeleni	55	28	70	75	7	2	36,1
Nqamakwe	45	14	31	68	119	4	37,8
Qumbu	44	12	60	79	32	2	30,9
Siphaqeni	63	16	35	43	23	3	27,1
Tabankulu	47	7	33	54	64	3	38,2
Tsolo	40	10	67	73	9	2	34,2
Tsomo	39	13	23	49	113	4	38,7
Umtata	43	15	51	112	120	4	61,3
Umzimkulu	32	5	136	92	-32	1	23,9
Umzimvubu	58	8	27	27	0	2	37,0
Xalanga	32	9	27	45	67	2	33,0
Xhora	57	19	37	54	46	3	50,0
TOTAL	-	-	1575	2024	28		

Source : Hawkins, Associates, 1980; Map I

TABLE 6 : CATTLE DEATHS APRIL TO NOVEMBER 1983

	April	May	June	July	August	Sept	Oct	Nov	Total
Number	19 523	27 256	24 848	33 792	82 183	64 821	49 218	30 014	331 655
%	5,9	8,2	7,5	10,2	24,8	19,5	14,8	9,0	99,9

\* Rounding error

### 3.4 Water and the Sexual Division of Labour

One effect of the drought which is difficult to quantify is the increased burden that is placed on women who are responsible for drawing water for domestic use. Under normal conditions villages are reliant on a number of nearby springs and rivers for their water needs. However, as the drought bites deeper, some of these dry up and the task of water collection becomes increasingly arduous. Whereas under normal conditions water collection may have required between 2 and 4 household hours per day the increased distances can quickly double this. Some drought relief coordinators reported that women were walking between 4 and 12 kilometers to fetch water. As women become weaker and the availability of draught animals decreases, the amount of water collected falls. Conditions are exacerbated in many betterment villages where state provided windmills and boreholes are often in a severe state of disrepair. As a direct consequence of the reduced availability of water people and stock increasingly share the same waterholes causing a qualitative decline in water supplies. The result is an increase in a variety of diseases that are directly related to qualitative and quantitative water inadequacies.

### 3.5 Health

An important effect of the drought has been to increase the incidence of water borne diseases. The number of Cholera cases increased 600% in 1983 over the 109 cases reported in 1982. There was also an outbreak of Typhoid at Sulenkama in the Qumbu district. Although figures are not available, discussions with a number of doctors at rural clinics and a births and deaths registrar in one district seem to imply an increase in infant and child mortality due to Kwashiorkor, Measels and Gastro Enteritis.

### 3.6 The Drought in Ntshiqo

Ntshiqo is a resettled village located about 8km outside Tsolo on the road to Maclear. Water is a perennial problem for both stock and the estimated 1200 residents who are dependent on a small stream and a single windmill. It is an area which shares the general characteristics of rural poverty. The mean annual household income was only R1098 45% was contributed by remittances by the 60% of the labour force away on migrant contracts. Infant mortality in 1983 was about 32% and 28,5% of households were landless Tuberculosis was rife and was the largest single killer of the population. The likely effect of the shortage of water during the drought could be seen in the fact that 25% of infant deaths were caused by stomach diseases. Given the generalised poverty of the community, it is difficult to assess exactly what affect the drought had on the human population, although the local school did report a greater incidence of absenteeism during the worst months of the drought. Some idea of the drought's impact can be seen in the effect on stock and agriculture.

#### 3.6.1 Livestock

Table 7 shows the effect of the drought on stock of different types. Although a distinction is made between stock deaths and those slaughtered (killed), this is in some senses artificial as it is likely that weak animals will be slaughtered. The combined total of deaths and slaughterings is taken as an indication of total effect of the drought. As was pointed out in the Macro figures, it is necessary to subtract about 12% from the figure for normal attution. Nevertheless, it is important to note that deaths are much higher amongst cattle than sheep or goats, indicating that smaller stock seem to be more drought resistant.

TABLE 7 : DEATHS IN 1983 BY STOCK TYPE

Type	1983 Total	Died	Killed	% Died	% Killed	% Died Killed
Goats	272	30	26	11,03	9,56	20,59
Sheep	841	107	51	12,72	6,06	19,26
Cattle	707	196	18	27,72	2,55	30,27

### 2.6.2 Agriculture

The impact on agriculture can be seen in tables 8 and 9. Table 8 shows that the fall in rainfall led to a decline in the numbers of fields planted from 117 in 1981 to 107 in 1982. The percentage of the population that did not plant any crops increased from 36,6% to 44,1%.

TABLE 8 : TYPES OF CROPS PLANTED 1981 - 1983

	1983		1982		1981	
Fields Planted	123		107		117	
Households Planting	109		93		102	
CROPS	NUMBER	% PLANTING HOUSEHOLDS	NUMBER	% PLANTING HOUSEHOLDS	NUMBER	% PLANTING HOUSEHOLDS
Maize	108	99,08	90	96,77	102	100,00
Spinach	2	1,83	1	1,08	1	0,98
Onions	1	0,92	0	0,00	0	0,00
Beans	85	77,98	72	77,47	86	84,31
Pumpkins	67	61,47	55	59,14	68	66,67
Potatoes	3	2,75	0	0,00	4	3,92
Sorghum	19	17,43	36	40,00	41	40,20

Secondly, table 9 reveals that the yields fell quite dramatically 64, 36% for maize, 42,34% for sorghum and 18,75% for beans. These indicators reveal clearly the rather fragile nature of rural water supplies, and the susceptibility of rural communities to drought.

In the next sections we outline possible responses to drought in Transkei.

TABLE 9 : SELECTED CROP YIELDS BY HARVEST YEAR

	MAIZE		SORGHUM		BEANS	
	1983	1982	1982	1982	1983	1982
Number of Households	161	161	161	161	161	161
Did Not Plant	71	59	125	115	89	73
% Did Not Plant	44,10	36,68	77,64	71,43	55,28	45,34
% No Yield	73,29	49,69	84,47	74,53	82,61	70,19
Village Yield (Bags)	121	384	46	103	28	42
Average Per Household (Bags)	0,75	2,39	0,29	0,63	0,17	0,26
Average Per Planter (Bags)	1.34	3,76	1,28	2,22	0,39	0,48
Average Per Harvester (Bags)	2,81	4,74	1,85	2,51	1,00	0,88

#### 4. DROUGHT RELIEF PROGRAMME IN TRANSKEI

The two most important drought relief efforts in Transkei were the efforts by the state based on a grant of Rm6,7<sup>(4)</sup> from the RSA treasury, and Operation Joseph run by the Transkei Council of Churches. In each case we sketch the basic organisation and extent of the programme before moving on to a preliminary assessment.

##### 4.1 The Official Drought Relief Programme

The Programme is under the control of the Civil Defence Unit with administrative responsibility held by the Transkei Department of Social Welfare. A Drought relief coordinator is appointed for each of the 28 magisterial districts in Transkei and is responsible for monitoring water, livestock, and health conditions and for selecting 'needy' families in consultation with local headmen.

There are three sub-programmes each of which received about one third of the Rm 6,7 budget:

A food programme was run to counter starvation. It was divided between a food voucher scheme where needy families were given vouchers of R. 25 month to be spent at local trading stores, and a Pro Nutro distribution programme through hospitals and clinics. The target was to support 300 different families per district per month.

The water relief programme attempted to provide water to the worst hit areas through the use of tankers provided by the Department of Agriculture and the South African Defence Force. Under its auspices a new dam was built to serve the Sterkspruit community and 859 windmills were repaired between July and October.

The stock feed programme consisted of providing stock feed at distribution points in Viedgesville, Qamata, Ndabakazi, Mt. Ayliff, Umzimkulu and Libode. This feed was then available to buyers who had to provide their own transport. The first 25 bales sold were

given a 50% subsidy while any further bales were sold at full price. Under this programme an attempt was made to repair dipping tanks, most of which were damaged to some extent.

#### 4.2 Operation Joseph

The largest programme outside government was 'Operation Joseph' run by the Transkei Council of Churches. This programme ran from August 1983 to January 1984. Monthly relief package of 25kg of maize and 8kg of beans were distributed to needy families identified by the pastors of local churches.<sup>(5)</sup> The programme was run in 10 districts and involved 1 600 families.

The programme was organised through member churches who were asked to identify 30 needy families who would receive aid for the duration of the programme. Once the families had been identified, the churches were authorised to buy the necessary package elements at selected local stores. The churches were responsible for distribution to the families. A total of R123 000 was spent in this manner.<sup>(6)</sup> In addition 14 350 bags of maize were donated by Operation Hunger. At an average cost of R4,50 per 12,5kg bag, this increased the total value of the programme to R.187 575.<sup>(7)</sup>

#### 4.3 Impact of the Drought Relief Programmes

It is still too early to draw hard conclusions on the impact of the drought relief programmes on rural communities as the drought is still not over and information is scanty - especially on the official programme. However, from the information available a number of issues are raised.

i) Selection of Recipients. The generalised poverty in Transkei makes it very difficult to select the most needy families. Neither programme laid down 'objective' criteria and relied on local decision makers, (headmen in the official programme and priests in Operation Joseph) to make final decisions. While this does have the advantage of involving locals, who should be familiar with conditions, it leads to the danger of nepotism and the temptation to add drought relief to the armoury of rural social control.

ii) Price Controls. Both programmes relied to some degree on food voucher systems. While this has the advantage of minimising on costly transport infrastructure,(7) if it is not linked to a system of rural price controls, the most likely consequence is price inflation and the distribution of relief towards store-owners through increased profits (8).

iii) Social Impact. The stock feed programme is perhaps most controversial here. As a start it excludes the poorest third of population that do not have cattle. Furthermore, when linked to the necessity of supplying ones own transport, it is clear that such a programme will prove of benefit only to the richer ruralites.

iv) Ideological Effects. A more general point, however, concerns the ideological effects of drought relief. While it would be pointless to deny that drought relief programmes are of benefit to the rural population they ameliorate rather than alter the fundamental conditions of rural poverty. While the success of Operations Joseph (in Transkei) and Hunger (South Africa) have revealed that the more affluent sections of the population can be shocked into donations, there is a danger that they will attribute too much to the drought. As the 'normal' characteristics of Transkei's rural areas outlined earlier have shown, nothing could be further from the truth.

However, while drought relief programmes may be important in tiding the population over, they do little to redress the fundamental problems of rural poverty and making communities more drought resistant. This requires both the correct delineation of the problem and the identification of possible strategies.

## 5. NATURE AND SOCIAL UNDERDEVELOPMENT IN TRANSKEI

The decline in agricultural output and stock deaths during the drought in Transkei reveal clearly the effects of inadequate rainfall on dry land production. However, given the relative unimportance of agriculture in rural incomes, it is felt that while water availability for production can be improved, and costly irrigation schemes expanded, a more important area of immediate concern is the availability of water at a household level. i.e water as a "basic need". There is often a trade off between increasing the volume and increasing the quality of the water supply. As one of the strongest motivations for rural water supply systems is the improvement in rural health, a specification of the water - health link is necessary.

Bradley (1977) has outlined the following typology of diseases and estimated the effect of improved water supplies on the incidence of disease.

(a) Water borne diseases are those spread by infected water. Examples are Cholera and Typhoid and their incidence can be reduced by 90% and 80% respectively through the elimination of the micro-biological organisms by chemical treatment i.e qualitative improvement.

(b) Water washed diseases such as trachoma, scabies, dysentery and gastro-enteritis are caused by inadequate water supplies for personal hygiene. Their incidence can be reduced by up to 50% by improved availability of water.

(c) The incidence of water based diseases like bilharzia, which are dependent for the transmission on organisms which spend part of their lives in water can be at by up to 60% by protecting users from exposure. This generally requires both micro-biological treatment of the water supply and education of the rural population.

(d) Finally there are a variety of diseases such as malaria transmitted by water related insect vectors such as mosquitoes.

Depending on the type of health problem, the necessary improvements in the water supply system might be undertaken. What then are the factors affecting the availability of water in Transkei?

#### 5.1 Factors affecting the availability of water in Transkei

Examination of the causes of water shortage, and the effects of the drought, suggest that they cannot be traced merely to inadequate water supplies or rainfall. The mean annual availability of water from Transkei's to major rivers and a number of smaller rivers is estimated at 10755 Mm<sup>3</sup>. Only 7.01% of the 7531 Mm<sup>3</sup> of this that is usable is being consumed at present. (Hawkins Associates, 1980 : tables 6.1 and 6.2). The annual ground water recharge is estimated at 6525 Mm<sup>3</sup>, 2 203 Mm<sup>3</sup> of which is regarded as extractable, only 19,15 Mm<sup>3</sup> of which is being utilised at present. The rainfall is regarded as sufficient for most agricultural purposes and 85% of the average annual rainfall can be expected to fall in any 7 - 10 year cycle. However, in this review of "Land use and water Resources", Pereira (1973 : 1) has this to say:

"Water falling on the land surface may run off directly into streams to drain by way of rivers and takes back into the sea, but the most important pathway for the sustenance of man is that of infiltration into the soil. From the soil vegetation is supplied, the surplus, seeping underground to springs, maintains the steady flow of rivers".

The long run availability of water depends crucially on the absorbtive capacity of the soil. Yet, in a review of water resources in Transkei it is claimed :

"Water conservation, however, has been less effective for, practically all Transkei's minor water courses have been gullied and most of the grazing land is overstocked. With the soil protection from rain drop impact removed, capping is encouraged resulting in increased run off and erosion. Poor plant cover and erosion of moisture absorbing top soil decreases soil moisture further, lessens groundwater replenishment and decreases the base flow of rivers, whilst silt and sand choke the channels of streams. Flash run off and muddy storm flow replace clear perennial flow. In consequence domestic and stock sources dry up in respect of both surface and ground water supplies. The storage dams built to replace them quickly become silted and water is no longer a gift of nature, but a scarce and expensive resource, even in areas of adequate rainfall" (Hawkins Report, 1980 : 95)

Consequently:

"The basic issue concerning land and agriculture is land pressure i.e overpopulation in relation to the available land under the prevailing systems of land use and land tenure. The typical symptoms of this condition are rampant erosion, a deterioration in water supplies and the inability of the land to support or feed the rural population". (Hawkins Associates, 1984 : 65)

Thus:

"The most effective option here would be to launch a full blooded soil and water conservation campaign and back this up by educating the local people into doing more to help themselves and by providing them with training on the technical side". (Hawkins Associates, 1984 : 76)

Elements of such a strategy might be small scale irrigation projects, reforestation to provide windbreaks, flood stage diversion to improve pasturage and spring protection to improve the quality of water.

However,

"While improved drinking water is probably a necessary condition for the improvement of peoples, it is not a sufficient condition. Because health is affected by numerous environmental, social, and cultural factors, it would be speculative to predict what the elimination of potential infections at the "official" water source would mean to the overall health of the community".

(Saunders and Worford, 1976 : 35)

One of the key reasons for this pessimism and their explanation of the poor health performance in villages with improved water supplies, is that a variety of intervening factors, most notably the water use patterns of the population, may reduce the impact of improved water. In Transkei, for example, it has been pointed out that while spring protection, windmills and boreholes increase the availability and quality of water:

"a disturbing feature of the taps is that children drink directly from them and as tuberculosis is endemic in Transkei this must be a point of transmission of this and other diseases". (Hawkins Associates, 1984 : 227)

Water improvement policies must be linked to a wider development strategy that seeks to uplift the community as a whole. Furthermore, as can be seen in the relation between the cattle losses and land pressure, the fundamental problem concerns the issue of overstocking. If one accepts the present division of South Africa under the regime of Separate Development, then it is clear that the path lies along that proposed by the Tomlinson Commission - the division of the homelands into agricultural communities living on the land, and full time workers in towns. (Hawkins Associate, 1984).

Yet, to talk glibly of reform without confronting the structural inequality which it expresses, runs the grave danger of making people worse off than they are now. In KwaZulu the Buthelezi Commission (1982 : 177):

"Concluded that no matter how desirable changes may be from the economic viewpoint, at present the social security of the people living in the tribal areas was so bound up into the traditional system of land tenure that any attempts in land reform at this stage would be likely to cause hardship and suffering than they would relieve. It seems likely that once some development has taken place, the desired land tenure reforms can be achieved at a very much lower social cost".

The basic argument of this paper is that while considerable strides can be made in improving the lot of the rural people in the homelands, through schemes such as those to improve water resources, until "some development" occurs cattle and "outdated" land tenure forms will continue. It is unlikely that such development will occur within the framework of Separate Development.

## 6. SUMMARY AND CONCLUSION

Firstly, the drought and its effects have to be located against the background of rural underdevelopment and population influx controls which have resulted in a sustained rural crisis. The drought has accelerated all the symptoms related to poverty whether they be lawlessness or malnutrition but it has not 'caused' them. These must be traced to the structural characteristics of racial capitalist development in South Africa which concentrates poverty along racial, spatial, and sexual lines. (Muller, 1982).

Secondly, the role of relief programmes. Relief in minute amounts to millions of Transkeians is a token gesture. Given the underdevelopment of Transkei, the poverty, overcrowding, land shortage and limited agricultural potential, relief (sometimes) fills stomachs but not aspirations. Until influx controls are removed and some pressure is taken off the land, the structural poverty of the rural population will continue. In this context rain might alleviate circumstances somewhat but it will not cure the evils that already exist.

Thirdly by damaging resources in an area where they are already scarce, the drought has increased the level of social conflict. Division caused by competition has been in evidence for sometime. During the drought it sharpened noticeably, especially over grazing and water rights. Desperate to keep their animals alive, people trespassed on other lands. Some even attempted to drive their cattle to the coastal areas. This led to confiscations, finings, assaults, and the introduction of new laws allowing for criminal prosecution of the owners of cattle found on 'agricultural schemes'. Historical and ethnic differences overlay the struggle for survival and allow easy lines of rural division unless people become more aware of the macro processes to which they are being subjected. Although there are no statistics, there are strong impressionistic grounds for believing that banditry and theft, symptoms of social disintegration, are increasing.

Finally the accumulation of structural poverty in the rural areas of Transkei is giving rise to new crises (9) and new forms of rural conflict. The relevance of these struggles to broader political events will turn importantly on whether or not they lead to increased internal conflict ('faction fights') or they link up to other attempts to restructure the fundamental imbalance of Apartheid South Africa.

FOOTNOTES

1. The term is Arrighi's (1969). Southey (1983) claims that a person working on the mines could earn more in three weeks than the average annual gross maize yield per family.
2. It has been estimated that the cost of keeping a cattle unit alive on survival rations for six months is R500 for non beef and dairy stock and R700 for the latter.
3. Not all deaths are attributable to the drought as they include death from other causes and slaughtering. Although there is some disagreement over the take-off rates with estimates ranging from 4% to 12%, Southey argues convincingly for a rate of about 7% per annum. Consequently, about 12% of stock would have died under 'normal' conditions.
4. This has to be compared with the amount of Rm 36,8 which was originally motivated for by the Transkei government. The Rm 6,7 was the total available for relief both to population and farmers and compares very unfavourably with the amounts given to white farmers. The amount was far from adequate to address the needs of the 10% - 15% of the population which was estimated to be left absolutely destitute. According to reports compiled by the district co-ordinators in conjunction with local social workers, 35 076 households were classified as 'needy' based on the criterion of no sources of income.
5. Criteria listed on the Operation Joseph form were families with:
  - little or no access to outside income earners;
  - little or no livestock or crop production;
  - no help from other agencies.Families did not need to be christian.
6. About 2/3 of funding came from overseas with the single largest contribution being R60 000 from Oxfam. Only R19 000 came from inside Transkei.

7. Operation Joseph seems to have had some success in keeping transport costs down through donation of vehicle 'trips'. Only about R1 500 was spent on transport.
8. Rural pricing is at best arbitrary. In Sterkspruit prices were lowered by five percent, but in general dealers were unwilling to cut profit margins. Against this some drought relief co-ordinators were of the opinion that store-keepers were reluctant to raise prices during the drought for fear of community retaliation. How widespread and effective this was, is unclear.
9. One important change is the strategies open to the destitute. Beinart and Bundy (19 : 281) record that the number of migrants from Transkei increased from 80 000 in 1911 to 96 000 in 1912 in response to the drought conditions of that year. The emergence of mass structural unemployment makes this highly unlikely in 1984. In fact, given the almost complete dependence on migrant income, rural families may have been as badly affected by the decline in migrant recruitment.

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